

AMENDMENTS TO THE CLAIMS

Listing of Claims:

1-16. (Canceled)

17. (Currently Amended) The method of ~~claim 16~~ claim 34 wherein the tool is fabricated from a material comprising: epoxy resin, fiberglass, or a combination thereof.

18. (Currently Amended) The method of ~~claim 16~~ claim 34 wherein the tool is fabricated from a material comprising: a fiberglass and a binding agent.

19. (Currently Amended) The method of ~~claim 16~~ claim 34 wherein the chemical solution comprises: a caustic fluid, an acidic fluid, or a combination thereof.

20. (Currently Amended) The method of ~~claim 16~~ claim 34 further comprising fabricating the tool from a material that may be customized to achieve a desired dissolution rate of the tool.

21. (Currently Amended) The method of ~~claim 16~~ claim 34 wherein the chemical solution may be customized to achieve a desired dissolution rate of the tool.

22. (Currently Amended) The method of ~~claim 16~~ claim 34 wherein the chemical solution is applied to the tool before performing the downhole operation.

23. (Currently Amended) The method of ~~claim 16~~ claim 34 wherein the chemical solution is applied to the tool during the downhole operation.

24. (Currently Amended) The method of ~~claim 16~~ claim 34 wherein the chemical solution is applied to the tool after performing the downhole operation.

25-31. (Canceled)

32. (Previously Presented) A method for performing a downhole operation wherein a downhole tool is disposed within a well bore comprising:

dissolving the tool within the well bore via a chemical solution, wherein the chemical solution is applied to the tool by dispensing the chemical solution into the well bore;

wherein the dispensing step comprises:

lowering a frangible object containing the chemical solution into the well bore; and

breaking the frangible object.

33. (Previously Presented) A method for performing a downhole operation wherein a downhole tool is disposed within a well bore comprising:

dissolving the tool within the well bore via a chemical solution, wherein the chemical solution is applied to the tool by dispensing the chemical solution into the well bore;

wherein the dispensing step comprises:

lowering a conduit into the well bore; and

flowing the chemical solution through the conduit onto the tool.

34. (Previously Presented) A method for performing a downhole operation wherein a downhole tool is disposed within a well bore comprising:

dissolving the tool within the well bore via a chemical solution;

moving a dart within the well bore; and

engaging the dart with the tool to release the chemical solution.

35. (Original) The method of claim 34 wherein the dart contains the chemical solution.

36. (Original) The method of claim 34 wherein the tool contains the chemical solution.

37. (Original) The method of claim 34 wherein the moving step comprises pumping a fluid into the well bore behind the dart.

38. (Original) The method of claim 34 wherein the moving step comprises allowing the dart to free fall by gravity.

39. (Currently Amended) The method of ~~claim 16~~ claim 34 wherein the tool comprises a frac plug, a bridge plug, or a packer.

40-42. (Canceled)

43. (Currently Amended) The system of ~~claim 40~~ claim 52 further comprising an activation mechanism for releasing the chemical solution from the enclosure.

44. (Canceled)

45. (Original) The system of claim 43 wherein the activation mechanism is mechanically operated.

46. (Original) The system of claim 43 wherein the activation mechanism is hydraulically operated.

47. (Original) The system of claim 43 wherein the activation mechanism is electrically operated.

48. (Original) The system of claim 43 wherein the activation mechanism is operated by a communications means.

49. (Original) The system of claim 43 wherein the activation mechanism is timer-controlled.

50. (Canceled)

51. (Currently Amended) A system for applying a chemical solution to a downhole tool to dissolve the tool within a well bore comprising:

a frangible enclosure that contains the chemical solution;

wherein the enclosure is broken to release the chemical; and

~~The system of claim 50~~ wherein the enclosure is lowered to the tool on a slick line.

52. (Currently Amended) A system for applying a chemical solution to a downhole tool to dissolve the tool within a well bore comprising:

a frangible enclosure that contains the chemical solution;

wherein the enclosure is broken to release the chemical; and

~~The system of claim 50~~ wherein the enclosure is dropped into the well bore to engage the tool.

53. (Canceled)

54. (Currently Amended) The system of ~~claim 40~~ claim 52 wherein the tool is formed of a material comprising: epoxy resin, fiberglass, or a combination thereof.

55. (Currently Amended) The system of ~~claim 40~~ claim 52 wherein the tool is formed of a material comprising: a fiberglass and a binding agent.

56. (Currently Amended) The system of ~~claim 40~~ claim 52 wherein the chemical solution comprises: a caustic fluid, an acidic fluid, or a combination thereof.

57– 80 (Canceled)

81. (New) The method of claim 32 wherein the tool is fabricated from a material comprising: epoxy resin, fiberglass, or a combination thereof.

82. (New) The method of claim 32 wherein the chemical solution comprises: a caustic fluid, an acidic fluid, or a combination thereof.
83. (New) The method of claim 32 further comprising fabricating the tool from a material that may be customized to achieve a desired dissolution rate of the tool.
84. (New) The method of claim 32 wherein the chemical solution may be customized to achieve a desired dissolution rate of the tool.
85. (New) The method of claim 32 wherein the chemical solution is applied to the tool before performing the downhole operation.
86. (New) The method of claim 32 wherein the chemical solution is applied to the tool during the downhole operation.
87. (New) The method of claim 32 wherein the tool comprises a frac plug, a bridge plug, or a packer.
88. (New) The method of claim 33 wherein the tool is fabricated from a material comprising: epoxy resin, fiberglass, or a combination thereof.
89. (New) The method of claim 33 wherein the chemical solution comprises: a caustic fluid, an acidic fluid, or a combination thereof.
90. (New) The method of claim 33 wherein the chemical solution may be customized to achieve a desired dissolution rate of the tool.
91. (New) The method of claim 33 wherein the chemical solution is applied to the tool before or after performing the downhole operation.

92. (New) The method of claim 33 wherein the chemical solution is applied to the tool during the downhole operation.
93. (New) The method of claim 33 wherein the tool comprises a frac plug, a bridge plug, or a packer.
94. (New) The system of claim 51 further comprising an activation mechanism for releasing the chemical solution from the enclosure.
95. (New) The system of claim 94 wherein the activation mechanism is mechanically, hydraulically, or electrically operated.
96. (New) The system of claim 94 wherein the activation mechanism is operated by a communications means.
97. (New) The system of claim 94 wherein the activation mechanism is timer-controlled.
98. (New) The system of claim 51 wherein the tool is formed of a material comprising: epoxy resin, fiberglass, or a combination thereof.
99. (New) The system of claim 51 wherein the chemical solution comprises: a caustic fluid, an acidic fluid, or a combination thereof.
100. (New) The system of claim 51 wherein the tool comprises a frac plug, a bridge plug, or a packer.
101. (New) The system of claim 52 wherein the tool comprises a frac plug, a bridge plug, or a packer.